(FILE 'USPAT' ENTERED AT 11:22:22 ON 24 MAR 1998)

L1	41151	S	424*?/CCLS
L2	39784	S	435*?/CCLS
L3	74747	S	514*?/CCLS
L4	19855	S	530*?/CCLS
L5	196	S	SERTOLI(2A)CELL#
L6	1	S	5725854/PN
L7	41	S	L1 AND L5
L8	109	S	L2 AND L5
L9	42	S	L3 AND L5
L10	104	S	L4 AND L5
L11	274	S	DIABETES AND PANCREAT?(P)ISLET
L12	1	S	L7 AND L11
L13	0	S	L8 AND L11
L14	0	S	L9 AND L11
L15	0	S	L10 AND L11
L16	13	S	L7 AND TRANSPLANT?
L17	28	S	L8 AND TRANSPLANT?
L18	10	S	L9 AND TRANSPLANT?
L19	16	S	L10 AND TRANSPLANT?

(FILE 'HOME' ENTERED AT 11:08:11 ON 24 MAR 1998)

FILE 'HCAPLUS, BIOSIS, MEDLINE' ENTERED AT 11:08:39 ON 24 MAR 1998

L1	14803	S	SERTOLI(2A)CELL#
L2	3	S	L1 AND DIABETES AND PANCREAT?(P)ISLET
L3	12	S	L1 AND PANCREAT?(L)ISLET
L4	190	S	SELAWRY, ?/AU
L5	9	S	L4 AND SERTOLI

L3 ANSWER 1 OF 12 HCAPLUS COPYRIGHT 1998 ACS

AB The present invention describes a method of treating a disease that results from a deficiency of a biol. factor which comprises administering to a mammal **Sertoli cells** and **cells** that produce the biol. factor. In particular, the present invention describes a method of treating diabetes mellitus by transplanting **pancreatic islet** of Langerhans cells in conjunction with **Sertoli cells** to create an immunol. privilege site. A method of creating an immunol. privileged site and providing cell stimulatory factors in a mammal for transplants further described by the present invention. A method of co-localizing **islet cells** with **Sertoli cells** and the use of the co-localized product treating diabetes mellitus is further provided. The present invention further describes a method of creating systemic tolerance to foreign antigens. A method of enhancing the viability, maturation, proliferation of functional capacity of cells in tissue culture is further provided. A pharmaceutical compn. comprising **Sertoli cells** and **cells** that produce a biol. factor is also provided.

ACCESSION NUMBER: 1997:127489 HCAPLUS
DOCUMENT NUMBER: 126:135688
TITLE: Use of co-localized islets and **Sertoli cells** in xenograft cellular transplants
INVENTOR(S): Selawry, Helena P.
PATENT ASSIGNEE(S): Research Corporation Technologies, Inc., USA
SOURCE: PCT Int. Appl., 109 pp.
CODEN: PIXXD2

	NUMBER	DATE
PATENT INFORMATION:	WO 9640178 A1	961219
DESIGNATED STATES:	W: AU, CA, JP, MX, NO RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE	
APPLICATION INFORMATION:	WO 96-US9627	960607
PRIORITY APPLN. INFO.:	US 95-485340	950607

DOCUMENT TYPE: Patent
LANGUAGE: English

TI Use of co-localized islets and **Sertoli cells** in xenograft cellular transplants

AB . . . method of treating a disease that results from a deficiency of a biol. factor which comprises administering to a mammal **Sertoli cells** and **cells** that produce the biol. factor. In particular, the present invention describes a method of treating diabetes mellitus by transplanting **pancreatic islet** of Langerhans cells in conjunction with **Sertoli cells** to create an immunol. privilege site. A method of creating an immunol. privileged site and providing cell stimulatory factors in a mammal for transplants further described by the present invention. A method of co-localizing **islet cells** with **Sertoli cells** and the use of the co-localized product treating diabetes mellitus is further provided. The present invention further describes a method. . . enhancing the viability, maturation, proliferation of functional capacity of cells in tissue culture is further provided. A pharmaceutical compn.

comprising **Sertoli cells** and **cells** that produce a biol. factor is also provided.

ST islet **Sertoli cell** xenograft cellular transplant

IT Nucleic acids
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(biol. factors encoded by; in co-localized islets and **Sertoli cells** for xenograft cellular transplants)

IT Antidiabetic agents
Drug delivery systems
Islet transplant
Sertoli cell
Transplant (organ)
Xenotransplant
(use of co-localized islets and **Sertoli cells** in xenograft cellular transplants)

IT Diabetes mellitus
(use of co-localized islets and **Sertoli cells** in xenograft cellular transplants for)

PY 1996

L3 ANSWER 2 OF 12 HCAPLUS COPYRIGHT 1998 ACS

AB Based on the detection of specific antibodies and T-cell sensitization in patients with IDDM, **islet** cell antigen p69 (ICAp69) has been suggested to be a target antigen of diabetic autoimmunity. The biol. function, tissue expression, and developmental kinetics of ICAp69 are largely unknown. We analyzed ICAp69 expression at the gene transcription and protein level in human and rodent tissues. By using template-calibrated quant. reverse transcriptase polymerase chain reaction (RT-PCR), high levels of ICAp69 mRNA were found in human **pancreatic** islets and brain. In mouse and rat, ICAp69 gene expression peaked in **islet** cell lines followed by testis, islets, and brain. ICAp69 mRNA was found at low levels in other organs by RT-PCR but not by Northern blot anal. In mice, ICAp69 transcription becomes detectable in fetal life, and fetal and adult gene expression patterns are similar. Western blot anal. of human and mouse tissues showed high expression of ICAp69 in brain, testis, **pancreatic** tissue, and **islet** cell lines. In these organs, ICAp69 immunoreactivity is predominately localized at the blood brain barrier (capillary endothelium), at the blood testis barrier (**Sertoli cells** and spermatids), and in **pancreatic** islets (.beta.-cells). The subcellular localization of ICAp69 to endoplasmic reticulum, Golgi complex, and vesicles by immune electron microscopy suggests a role of this neuroendocrine mol. in cellular protein in traffic and processing.

ACCESSION NUMBER: 1996:365083 HCAPLUS
DOCUMENT NUMBER: 125:82605
TITLE: Gene expression of islet cell antigen p69 in human, mouse, and rat
AUTHOR(S): Karges, Wolfram; Pietropaolo, Massimo; Ackerley, Cameron A.; Dosch, Hans-Michael
CORPORATE SOURCE: Dep. Pediatrics, Univ. Toronto, Toronto, ON, Can.
SOURCE: Diabetes (1996), 45(4), 513-521
CODEN: DIAEAZ; ISSN: 0012-1797
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Based on the detection of specific antibodies and T-cell sensitization in patients with IDDM, **islet** cell antigen p69 (ICAp69) has been suggested to be a target antigen of diabetic autoimmunity. The biol. function, tissue expression,. . . tissues. By using template-calibrated quant. reverse transcriptase polymerase chain reaction (RT-PCR), high levels of ICAp69 mRNA were

found in human **pancreatic** islets and brain. In mouse and rat, ICAp69 gene expression peaked in **islet** cell lines followed by testis, islets, and brain. ICAp69 mRNA was found at low levels in other organs by RT-PCR. . . expression patterns are similar. Western blot anal. of human and mouse tissues showed high expression of ICAp69 in brain, testis, **pancreatic** tissue, and **islet** cell lines. In these organs, ICAp69 immunoreactivity is predominately localized at the blood brain barrier (capillary endothelium), at the blood testis barrier (**Sertoli cells** and spermatids), and in **pancreatic** islets (.beta.-cells). The subcellular localization of ICAp69 to endoplasmic reticulum, Golgi complex, and vesicles by immune electron microscopy suggests a. . .

IT Animal tissue
Brain
Endoplasmic reticulum
Golgi apparatus
Pancreatic islet of Langerhans
Testis
(gene expression of **islet** cell antigen p69 in human, mouse, and rat)

PY 1996

L3 ANSWER 3 OF 12 HCAPLUS COPYRIGHT 1998 ACS

AB Peptide .alpha.-amidation, an essential posttranslational modification that confers bioactivity to many neuroendocrine peptides is catalyzed by peptidylglycine .alpha.-amidating monooxygenase (PAM; EC 1.14.17.3). To complement previous studies on the distribution of PAM in neuroendocrine organs, expression of the PAM gene in several endocrine tissues was examd. by in situ hybridization and immunocytochem. In all instances, the autoradiog. densities for PAM mRNA correlated with staining patterns for PAM immunoreactivity. Very high levels of PAM mRNA were found in all heart atrial cardiomyocytes, whereas much lower levels were present in ventricular cells. In the sublingual gland, PAM was expressed diffusely in both acinar and tubule cells. In contrast, expression of PAM was confined to granular convoluted tubule cells in the submaxillary gland. PAM was expressed at high levels in a subset of adrenal medullary chromaffin cells, and low levels of PAM mRNA and immunoreactivity were also detected in the adrenal cortex. PAM was found predominately in the calcitonin-producing parafollicular C-cells in the thyroid gland and in the glucagon-contg. A-cells in the endocrine pancreas. Collecting and distal tubule cells of the kidney expressed both PAM mRNA and immunoreactivity. The basal cells in testicular seminiferous tubules contg. PAM may represent developing germ and **Sertoli cells**. The cellular localization of PAM within the thyroid gland, adrenal gland, testis, and pancreas correlated with known peptidergic systems, and some of the obsd. cellular heterogeneity in PAM mRNA expression and immunoreactivity may reflect differences in the levels of amidated peptide prodn. The expression of PAM in cells not known to produce high levels of .alpha.-amidated peptides may indicate the prodn. of yet unidentified .alpha.-amidated bioactive peptides or alternative functions of the PAM protein.

ACCESSION NUMBER: 1992:463676 HCAPLUS
DOCUMENT NUMBER: 117:63676
TITLE: Expression of peptidylglycine .alpha.-amidating monooxygenase: an in situ hybridization and immunocytochemical study
AUTHOR(S): Braas, Karen M.; Harakall, Susan A.; Ouafik, L'houchine; Eipper, Betty A.; May, Victor
CORPORATE SOURCE: Coll. Med., Univ. Vermon, Burlington, VT, 05405, USA
SOURCE: Endocrinology (Baltimore) (1992), 130(5), 2778-88

CODEN: ENDOAO; ISSN: 0013-7227
DOCUMENT TYPE: Journal
LANGUAGE: English
AB . . . expressed both PAM mRNA and immunoreactivity. The basal cells in testicular seminiferous tubules contg. PAM may represent developing germ and **Sertoli cells**. The cellular localization of PAM within the thyroid gland, adrenal gland, testis, and pancreas correlated with known peptidergic systems, and. . .
IT **Pancreatic islet** of Langerhans
Salivary gland
Adrenal gland, composition
Heart, composition
Kidney, composition
Testis, composition
Thyroid gland, composition
(peptidylglycine amidating monooxygenase distribution in)
PY 1992

L3 ANSWER 4 OF 12 HCAPLUS COPYRIGHT 1998 ACS
AB Distribution of S-100 protein in the chick non-nervous tissues was investigated by an immunohistochem. method using anti-bovine S-100 protein serum. S-100 protein immunoreactivity was detected in stellate cells of the pituitary gland, insulin cells and somatostatin cells of the **pancreatic islet**, epithelial cells of the proventriculus, and epithelial cells of the distal and the collecting tubules in the kidney. The **Sertoli cells** and oocytes also contained S-100 protein. Evidently, occurrence and distribution of S-100 protein immunoreactivity cells of the chick is less numerous than that of mammals.
ACCESSION NUMBER: 1991:182411 HCAPLUS
DOCUMENT NUMBER: 114:182411
TITLE: Immunohistochemical demonstration of S-100 protein in the chick non-nervous tissues
AUTHOR(S): Atoji, Yasuro; Takayanagi, Kouji; Suzuki, Yoshitaka; Sugimura, Makoto
CORPORATE SOURCE: Fac. Agric., Gifu Univ., Gifu, 501-11, Japan
SOURCE: Zool. Sci. (1990), 7(4), 747-53
CODEN: ZOSCEX; ISSN: 0289-0003
DOCUMENT TYPE: Journal
LANGUAGE: English
AB . . . serum. S-100 protein immunoreactivity was detected in stellate cells of the pituitary gland, insulin cells and somatostatin cells of the **pancreatic islet**, epithelial cells of the proventriculus, and epithelial cells of the distal and the collecting tubules in the kidney. The **Sertoli cells** and oocytes also contained S-100 protein. Evidently, occurrence and distribution of S-100 protein immunoreactivity cells of the chick is less. . .
IT Testis, composition
(**Sertoli cell**, protein S-100 localization in, of chicken)
IT **Pancreatic islet** of Langerhans
(.beta.-cell, protein S-100 of, of chicken)
IT **Pancreatic islet** of Langerhans
(.delta.-cell, protein S-100 of, of chicken)
PY 1990

L3 ANSWER 5 OF 12 HCAPLUS COPYRIGHT 1998 ACS
AB The histogenesis of Ewing's sarcoma (ES), the second most frequent primary bone tumor in humans, remains controversial. A new cell line (SIM-1) was derived from a peripheral neuroectodermal tumor (PNET) and used for the prodn. of a monoclonal antibody (HBA-71), which recognizes a novel cell surface antigen of ES- and PNET-derived cells and paraffin-embedded tumor sections. The HBA-71

antigen expression is restricted to PNET/ES and the antigen was not detected on cell lines or tissue sections of any other tumor tested, with the exception of ependymoma. Three proteins with mol. wts. of 300,000, 185,000, and 90,000 were isolated from SIM-1 membrane exts. by HBA-71 affinity chromatog. Trypsin treatment of intact SIM-1 cells destroys the HBA-71 epitope and cleaves off two proteins with mol. wts. of 210,000 and 95,000. Within normal tissues reactivity was obsd. with the adenohypophysis, ependymal **cells**, endocrine pancreas, **Sertoli**, and ovary granulosa cells. The reagent links ES with PNET and provides a highly valuable probe for (a) the immunohistol. differential diagnosis of ES/PNET using fresh tissue or paraffin sections from other small round cell tumors, (b) the histogenetic studies of ES/PNET, and (c) in vivo diagnostic and therapeutic procedures in patients with ES and PNET.

ACCESSION NUMBER: 1988:628145 HCAPLUS
DOCUMENT NUMBER: 109:228145
TITLE: Characterization of a human endocrine tissue and tumor-associated Ewing's sarcoma antigen
AUTHOR(S): Hamilton, Gerhard; Fellinger, Erich J.; Schratter, Inge; Fritsch, Arnulf
CORPORATE SOURCE: Sch. Med., Univ. Vienna, Vienna, A-1090, Austria
SOURCE: Cancer Res. (1988), 48(21), 6127-31
CODEN: CNREA8; ISSN: 0008-5472
DOCUMENT TYPE: Journal
LANGUAGE: English

AB . . . off two proteins with mol. wts. of 210,000 and 95,000. Within normal tissues reactivity was obsd. with the adenohypophysis, ependymal **cells**, endocrine pancreas, **Sertoli**, and ovary granulosa cells. The reagent links ES with PNET and provides a highly valuable probe for (a) the immunohistol.. . .

IT Endocrine system
Pancreatic islet of Langerhans
Pituitary gland, anterior lobe
(antigen HBA-71 of human, properties of)

IT Testis, composition
(**Sertoli cell**, antigen HBA-71 of human, properties of)

PY 1988

L3 ANSWER 6 OF 12 HCAPLUS COPYRIGHT 1998 ACS

AB A polyclonal antiserum to bovine intestinal phosphodiesterase I (PDE I) was produced, and cross-reactivity was demonstrated with the human intestinal enzyme. This polyclonal antiserum was used in peroxidase-antiperoxidase immunocytochem. to localize immunoreactive PDE I in a variety of human tissues. Localization was prominent in the gastrointestinal tract, including the cytoplasm of gastric mucosa parietal cells, cytoplasm of surface epithelium and isolated crypt cells in small intestine, and the colonic epithelial cytoplasm and brush border. Parotid gland acinar cells and scattered ductal cells showed pos. cytoplasmic staining. Acinar and scattered **pancreatic islet** cells contained immunoreactive PDE I, as did Kupffer cells of the liver sinusoids. Immunoreactive PDE I was found in all vascular endothelia. The epithelium of the urinary tract showed extensive immunoreactivity. This included the distal convoluted and collecting tubules of the kidney and the ureteral and bladder urothelium. Immunoreactive PDE I was localized to human **Sertoli cells** and to basal epithelium of the epididymis and prostate acini. Fallopian tube epithelium of the female reproductive tract also demonstrated immunoreactive PDI I, as did several cell types in the term placenta. These immunocytochem. results with human tissues differ significantly from previous histochem. studies in animal tissues, principally in the genitourinary system. This may be due in part to the different detection systems employed as well as the higher sensitivity of the immunoperoxidase technique. This underscores the importance of

adjunct techniques in tissue surveys. The widespread epithelial distribution of immunoreactive PDE I detected by this polyclonal antibody implies an integral role in cell function, probably in active transport.

ACCESSION NUMBER: 1987:64717 HCAPLUS
DOCUMENT NUMBER: 106:64717
TITLE: Distribution of phosphodiesterase I in normal human tissues
AUTHOR(S): Morley, Debra J.; Hawley, Dennis M.; Ulbright, Thomas M.; Butler, Larry G.; Culp, Jeffrey S.; Hodes, M. E.
CORPORATE SOURCE: Dep. Med. Genet., Indiana Univ. Med., Indianapolis, IN, USA
SOURCE: J. Histochem. Cytochem. (1987), 35(1), 75-82
CODEN: JHCYAS; ISSN: 0022-1554
DOCUMENT TYPE: Journal
LANGUAGE: English
AB . . . epithelial cytoplasm and brush border. Parotid gland acinar cells and scattered ductal cells showed pos. cytoplasmic staining. Acinar and scattered **pancreatic islet** cells contained immunoreactive PDE I, as did Kupffer cells of the liver sinusoids. Immunoreactive PDE I was found in all. . . convoluted and collecting tubules of the kidney and the ureteral and bladder urothelium. Immunoreactive PDE I was localized to human **Sertoli cells** and to basal epithelium of the epididymis and prostate acini. Fallopian tube epithelium of the female reproductive tract also demonstrated. . .
IT Epididymis
Pancreatic islet of Langerhans
Placenta
Prostate gland
(phosphodiesterase I of, of human)
IT Testis, composition
(**Sertoli cell**, phosphodiesterase I of, of human)
PY 1987

L3 ANSWER 7 OF 12 BIOSIS COPYRIGHT 1998 BIOSIS
AN 96:505491 BIOSIS
AB A lack of a sufficient number of human donor pancreases has stimulated interest in isolation and cryopreservation techniques for islets from the porcine pancreas. But because of a poorly developed outer membrane porcine islets are particularly susceptible to damage during cryopreservation. The aims of this study were twofold: 1) to develop a method for isolation and storage of islets from neonatal porcine pancreas and, 2) to examine effects of **Sertoli cells** on islet yield and function in **Sertoli cell**-islet **cell** cocultures. A total of 170 neonatal porcine pancreases were processed by means of a short period of digestion with collagenase and culture of the tissues at 32 degree C for periods up to 7 days following isolation. Results were: The mean +-SEM, number of viable islets, and percentage loss of cells following 7 days of culture were 29,442 +- 1,119 and 22.2 +- 1.2, respectively. Cryopreservation had a marked impact on recovery of viable islets: In absence of **Sertoli cells** an average of only 64% of islets remained viable; by contrast, when cryopreserved islets were cocultured with **Sertoli cells**, a mean of 82% was recovered. Glucose at 16.7 mmol/L had the capacity to elicit insulin release from 3-day-old cultured islets. The concentration in absence of **Sertoli cells** was 57.3 +- 3.8, uU/mL/10 islets; in the presence of **Sertoli cells** the level increased to a mean +- SEM of 112.8 t 17.7, uU/mL/10 islets. Similar results were obtained following cryopreservation: glucose at 16.7 mmol/L stimulated a mean +- SEM of 27.9 +- 6.6, uU/mL/10 islets, of insulin in absence of, and

44.9 +- 9.9, uU/mL/10 islets, in presence of, **Sertoli cells**. Our results show that isolation and cryopreservation of neonatal porcine islets can be successfully accomplished. In addition, coculture with **Sertoli cells** significantly improves both the yield and functional capacity of islets following cryopreservation.

DOCUMENT NUMBER: 99227847
TITLE: **Sertoli cell**-induced effects on functional and structural characteristics of isolated neonatal porcine islets.
AUTHOR(S): Selawry H P; Wang X; Alloush L
CORPORATE SOURCE: Veterans Affairs Med. Cent., Research 151, 1030 Jefferson Ave., Memphis, TN 38104, USA
SOURCE: Cell Transplantation 5 (5). 1996. 517-524. ISSN: 0963-6897
LANGUAGE: English

TI **Sertoli cell**-induced effects on functional and structural characteristics of isolated neonatal porcine islets.

AB . . . to develop a method for isolation and storage of islets from neonatal porcine pancreas and, 2) to examine effects of **Sertoli cells** on islet yield and function in **Sertoli cell**-islet **cell** cocultures. A total of 170 neonatal porcine pancreases were processed by means of a short period of digestion with collagenase. . . +- 1,119 and 22.2 +- 1.2, respectively. Cryopreservation had a marked impact on recovery of viable islets: In absence of **Sertoli cells** an average of only 64% of islets remained viable; by contrast, when cryopreserved islets were cocultured with **Sertoli cells**, a mean of 82% was recovered. Glucose at 16.7 mmol/L had the capacity to elicit insulin release from 3-day-old cultured islets. The concentration in absence of **Sertoli cells** was 57.3 +- 3.8, uU/mL/10 islets; in the presence of **Sertoli cells** the level increased to a mean +- SEM of 112.8 t 17.7, uU/mL/10 islets. Similar results were obtained following cryopreservation:. . . of 27.9 +- 6.6, uU/mL/10 islets, of insulin in absence of, and 44.9 +- 9.9, uU/mL/10 islets, in presence of, **Sertoli cells**. Our results show that isolation and cryopreservation of neonatal porcine islets can be successfully accomplished. In addition, coculture with **Sertoli cells** significantly improves both the yield and functional capacity of islets following cryopreservation.

ST RESEARCH ARTICLE; PORCINE; NEONATE; **SERTOLI CELL**; **PANCREATIC ISLET** CELL; CRYOPRESERVATION; CELL BIOLOGY; METHODOLOGY; MISCELLANEOUS METHOD

L3 ANSWER 8 OF 12 BIOSIS COPYRIGHT 1998 BIOSIS
AN 96:218340 BIOSIS
AB Based on the detection of specific antibodies and T-cell sensitization in patients with EDDM, **islet** cell antigen p69 (ICAp69) has been suggested to be a target antigen of diabetic autoimmunity. The biological function, tissue expression, and developmental kinetics of ICAp69 are largely unknown. We analyzed ICAp69 expression at the gene transcription and protein level in human and rodent tissues. By using template-calibrated quantitative reverse transcriptase polymerase chain reaction (RT-PCR), high levels of ICAp69 mRNA were found in human **pancreatic** islets and brain. In mouse and rat, ICAp69 gene expression peaked in **islet** cell lines followed by testis, islets, and brain. ICAp69 mRNA was found at low levels in other organs by RT-PCR but not by Northern blot analysis. In mice, ICAp69 transcription becomes detectable in fetal life, and fetal and adult gene expression patterns are similar. Western blot analysis of human and mouse tissues showed high expression of ICAp69 in brain, testis, **pancreatic** tissue, and **islet** cell lines. In these organs, ICAp69 immunoreactivity is predominately localized at the

blood brain barrier (capillary endothelium), at the blood testis barrier (**Sertoli cells** and spermatids), and in **pancreatic** islets (beta-cells). The subcellular localization of ICAp69 to endoplasmic reticulum, Golgi complex, and vesicles by immune electron microscopy suggests a role of this neuroendocrine molecule in cellular protein traffic and processing.

DOCUMENT NUMBER: 98774469
TITLE: Gene expression of islet cell antigen p69 in human, mouse, and rat.
AUTHOR(S): Karges W; Pietropaolo M; Ackerley C A; Dosch H-M
CORPORATE SOURCE: Dep. Pediatrics Immunology, Hosp. Sick Children, 555 University Ave., Toronto, ON M5G 1X8, Canada
SOURCE: Diabetes 45 (4). 1996. 513-521. ISSN: 0012-1797
LANGUAGE: English

AB Based on the detection of specific antibodies and T-cell sensitization in patients with EDDM, **islet** cell antigen p69 (ICAp69) has been suggested to be a target antigen of diabetic autoimmunity. The biological function, tissue expression,. . . tissues. By using template-calibrated quantitative reverse transcriptase polymerase chain reaction (RT-PCR), high levels of ICAp69 mRNA were found in human **pancreatic** islets and brain. In mouse and rat, ICAp69 gene expression peaked in **islet** cell lines followed by testis, islets, and brain. ICAp69 mRNA was found at low levels in other organs by RT-PCR. . . expression patterns are similar. Western blot analysis of human and mouse tissues showed high expression of ICAp69 in brain, testis, **pancreatic** tissue, and **islet** cell lines. In these organs, ICAp69 immunoreactivity is predominately localized at the blood brain barrier (capillary endothelium), at the blood testis barrier (**Sertoli cells** and spermatids), and in **pancreatic** islets (beta-cells). The subcellular localization of ICAp69 to endoplasmic reticulum, Golgi complex, and vesicles by immune electron microscopy suggests a. . .

L3 ANSWER 9 OF 12 BIOSIS COPYRIGHT 1998 BIOSIS
AN 90:517941 BIOSIS

AB Distribution of S-100 protein in the chick non-nervous tissues was investigated by immunohistochemical method using anti-bovine S-100 protein serum. S-100 protein immunoreactivity was detected in stellate cells of the pituitary gland, insulin cells and somatostatin cells of the **pancreatic islet**, epithelial cells of the proventriculus, and epithelial cells of the distal and the collecting tubules in the kidney. The **Sertoli cells** and oocytes also contained S-100 protein. These findings indicate that the occurrence and distribution of S-100 protein immunoreactive cells of the chick is less numerous than that of mammals.

DOCUMENT NUMBER: BA90:135217
TITLE: IMMUNOHISTOCHEMICAL DEMONSTRATION OF S-100 PROTEIN IN THE CHICK NON-NERVOUS TISSUES.
AUTHOR(S): ATOJI Y; TAKAYANAGI K; SUZUKI Y; SUGIMURA M
CORPORATE SOURCE: DEP. VET. ANATOMY, FAC. AGRIC., GIFU UNIV., GIFU 501-11.
SOURCE: ZOOL SCI (TOKYO) 7 (4). 1990. 747-754. CODEN: ZOSCEX ISSN: 0289-0003
LANGUAGE: English

AB . . . serum. S-100 protein immunoreactivity was detected in stellate cells of the pituitary gland, insulin cells and somatostatin cells of the **pancreatic islet**, epithelial cells of the proventriculus, and epithelial cells of the distal and the collecting tubules in the kidney. The **Sertoli cells** and oocytes also contained S-100 protein. These findings indicate that the occurrence and distribution of S-100 protein immunoreactive cells of. . .

ST PITUITARY STELLATE CELL PANCREATIC INSULIN CELL SOMATOSTATIN CELL PROVENTRICULAR EPITHELIAL **CELL** KIDNEY EPITHELIUM

SERTOLI CELL OOCYTE

L3 ANSWER 10 OF 12 BIOSIS COPYRIGHT 1998 BIOSIS
AN 87:129856 BIOSIS
AB Phosphodiesterase I (PDE I) is an exonuclease capable of hydrolyzing a variety of phosphate ester and pyrophosphate bonds. Cell fractionation and histochemical studies in animal tissues have localized PDE I in the plasma membrane of various epithelia. This suggests a role for the enzyme in active transport. Distribution of PDE I in human tissues has not previously been studied. We have produced a polyclonal antiserum to bovine intestinal PDE I and have demonstrated crossreactivity with the human intestinal enzyme. This polyclonal antiserum was used in PAP immunocytochemistry to localize immunoreactive PDE I in a variety of human tissues. Localization was prominent in the gastrointestinal tract, including of the cytoplasma of gastric mucosa parietal cells, cytoplasm of surface epithelium and isolated crypt cells in small intestine, and the colonic epithelial cytoplasm and brush border. Parotid gland acinar cells and scattered ductal cells showed positive cytoplasmic staining. Acinar and scattered **pancreatic islet** cells contained immunoreactive PDE I, as did Kuppfer cells of the liver sinusoids. Immunoreactive PDE I was found in all vascular endothelial. The epithelium of the urinary tract showed extensive immunoreactivity. This included the distal convoluted and collecting tubules of the kidney, and ureteral and bladder urothelium. In previous histochemical studies of animal tissues, no evidence of PDE I activity was noted in male or female reproductive tract. In this study, immunoreactive PDE I was localized to human **Sertoli cells** and to basal epithelium of the epididymis and prostate acini. Fallopian tube epithelium of female reproductive tract also demonstrated immunoreactive PDI I, as did several cell types in term placenta. Our immunocytochemical results with human tissues differ significantly from previous histochemical studies in animal tissues, principally in the genitourinary system. This may be due in part to the different detection systems employed as well as the higher sensitivity of the immunoperoxidase technique. This underscores the importance of adjunct techniques in tissue surveys. The widespread epithelial distribution of immunoreactive PDE I detected by this polyclonal antibody implies an integral role in cell function, probably in active transport.
DOCUMENT NUMBER: BA83:68917
TITLE: DISTRIBUTION OF PHOSPHODIESTERASE I IN NORMAL HUMAN TISSUES.
AUTHOR(S): MORLEY D J; HAWLEY D M; ULBRIGHT T M; BUTLER L G; CULP J S; HODES M E
CORPORATE SOURCE: DEP. OF MED. GENETICS, INDIANA UNIV. SCH. OF MED., 702 BARNHILL DR., INDIANAPOLIS, INDIANA 46223.
SOURCE: J HISTOCHEM CYTOCHEM 35 (1). 1987. 75-82. CODEN: JHCYAS ISSN: 0022-1554
LANGUAGE: English
AB . . . epithelial cytoplasm and brush border. Parotid gland acinar cells and scattered ductal cells showed positive cytoplasmic staining. Acinar and scattered **pancreatic islet** cells contained immunoreactive PDE I, as did Kuppfer cells of the liver sinusoids. Immunoreactive PDE I was found in all. . . I activity was noted in male or female reproductive tract. In this study, immunoreactive PDE I was localized to human **Sertoli cells** and to basal epithelium of the epididymis and prostate acini. Fallopian tube epithelium of female reproductive tract also demonstrated immunoreactive. . .
ST COW IMMUNOPEROXIDASE TECHNIQUE ANIMAL TISSUES **SERTOLI CELLS** KIDNEY BLOOD VESSELS KUPFFER CELLS **PANCREATIC ISLET** CELLS PAROTID GLAND ACINAR CELLS INTESTINE IMMUNOCYTOCHEMISTRY CROSS-REACTIVITY ACTIVE TRANSPORT EPITHELIAL PLASMA MEMBRANE HISTOCHEMISTRY CELL FRACTIONATION

L3 ANSWER 11 OF 12 MEDLINE

AB Based on the detection of specific antibodies and T-cell sensitization in patients with IDDM, **islet** cell antigen p69 (ICAp69) has been suggested to be a target antigen of diabetic autoimmunity. The biological function, tissue expression, and developmental kinetics of ICAp69 are largely unknown. We analyzed ICAp69 expression at the gene transcription and protein level in human and rodent tissues. By using template-calibrated quantitative reverse transcriptase polymerase chain reaction (RT-PCR), high levels of ICAp69 mRNA were found in human **pancreatic** islets and brain. In mouse and rat, ICAp69 gene expression peaked in **islet** cell lines followed by testis, islets, and brain. ICAp69 mRNA was found at low levels in other organs by RT-PCR but not by Northern blot analysis. In mice, ICAp69 transcription becomes detectable in fetal life, and fetal and adult gene expression patterns are similar. Western blot analysis of human and mouse tissues showed high expression of ICAp69 in brain, testis, **pancreatic** tissue, and **islet** cell lines. In these organs, ICAp69 immunoreactivity is predominately localized at the blood brain barrier (capillary endothelium), at the blood testis barrier (**Sertoli cells** and spermatids), and in **pancreatic** islets (beta-cells). The subcellular localization of ICAp69 to endoplasmic reticulum, Golgi complex, and vesicles by immune electron microscopy suggests a role of this neuroendocrine molecule in cellular protein traffic and processing.off

ACCESSION NUMBER: 96177282 MEDLINE
DOCUMENT NUMBER: 96177282
TITLE: Gene expression of islet cell antigen p69 in human, mouse, and rat.
AUTHOR: Karges W; Pietropaolo M; Ackerley C A; Dosch H M
CORPORATE SOURCE: Department of Pediatrics and Immunology, University of Toronto, Ontario, Canada.
SOURCE: DIABETES, (1996 Apr) 45 (4) 513-21.
Journal code: E8X. ISSN: 0012-1797.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199607

AB Based on the detection of specific antibodies and T-cell sensitization in patients with IDDM, **islet** cell antigen p69 (ICAp69) has been suggested to be a target antigen of diabetic autoimmunity. The biological function, tissue expression,. . . tissues. By using template-calibrated quantitative reverse transcriptase polymerase chain reaction (RT-PCR), high levels of ICAp69 mRNA were found in human **pancreatic** islets and brain. In mouse and rat, ICAp69 gene expression peaked in **islet** cell lines followed by testis, islets, and brain. ICAp69 mRNA was found at low levels in other organs by RT-PCR. . . expression patterns are similar. Western blot analysis of human and mouse tissues showed high expression of ICAp69 in brain, testis, **pancreatic** tissue, and **islet** cell lines. In these organs, ICAp69 immunoreactivity is predominately localized at the blood brain barrier (capillary endothelium), at the blood testis barrier (**Sertoli cells** and spermatids), and in **pancreatic** islets (beta-cells). The subcellular localization of ICAp69 to endoplasmic reticulum, Golgi complex, and vesicles by immune electron microscopy suggests a. . .

PY 1996

L3 ANSWER 12 OF 12 MEDLINE

AB Phosphodiesterase I (PDE I) is an exonuclease capable of hydrolyzing a variety of phosphate ester and pyrophosphate bonds. Cell fractionation and histochemical studies in animal tissues have

localized PDE I in the plasma membrane of various epithelia. This suggests a role for the enzyme in active transport. Distribution of PDE I in human tissues has not previously been studied. We have produced a polyclonal antiserum to bovine intestinal PDE I and have demonstrated crossreactivity with the human intestinal enzyme. This polyclonal antiserum was used in PAP immunocytochemistry to localize immunoreactive PDE I in a variety of human tissues. Localization was prominent in the gastrointestinal tract, including the cytoplasm of gastric mucosa parietal cells, cytoplasm of surface epithelium and isolated crypt cells in small intestine, and the colonic epithelial cytoplasm and brush border. Parotid gland acinar cells and scattered ductal cells showed positive cytoplasmic staining. Acinar and scattered **pancreatic islet** cells contained immunoreactive PDE I, as did Kupffer cells of the liver sinusoids. Immunoreactive PDE I was found in all vascular endothelia. The epithelium of the urinary tract showed extensive immunoreactivity. This included the distal convoluted and collecting tubules of the kidney, and ureteral and bladder urothelium. In previous histochemical studies of animal tissues, no evidence of PDE I activity was noted in male or female reproductive tract. In this study, immunoreactive PDE I was localized to human **Sertoli cells** and to basal epithelium of the epididymis and prostate acini. Fallopian tube epithelium of female reproductive tract also demonstrated immunoreactive PDI I, as did several cell types in term placenta. Our immunocytochemical results with human tissues differ significantly from previous histochemical studies in animal tissues, principally in the genitourinary system. This may be due in part to the different detection systems employed as well as the higher sensitivity of the immunoperoxidase technique. This underscores the importance of adjunct techniques in tissue surveys. The widespread epithelial distribution of immunoreactive PDE I detected by this polyclonal antibody implies an integral role in cell function, probably in active transport.

ACCESSION NUMBER: 87084682 MEDLINE
DOCUMENT NUMBER: 87084682
TITLE: Distribution of phosphodiesterase I in normal human tissues.
AUTHOR: Morley D J; Hawley D M; Ulbright T M; Butler L G; Culp J S; Hodes M E
SOURCE: JOURNAL OF HISTOCHEMISTRY AND CYTOCHEMISTRY, (1987 Jan) 35 (1) 75-82.
Journal code: IDZ. ISSN: 0022-1554.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 198704
AB . . . epithelial cytoplasm and brush border. Parotid gland acinar cells and scattered ductal cells showed positive cytoplasmic staining. Acinar and scattered **pancreatic islet** cells contained immunoreactive PDE I, as did Kupffer cells of the liver sinusoids. Immunoreactive PDE I was found in all. . . I activity was noted in male or female reproductive tract. In this study, immunoreactive PDE I was localized to human **Sertoli cells** and to basal epithelium of the epididymis and prostate acini. Fallopian tube epithelium of female reproductive tract also demonstrated immunoreactive. . .
PY 1987

=> s selawry, ?/au

L4 190 SELAWRY, ?/AU

=> s l4 and sertoli

L5 9 L4 AND SERTOLI

=> d l5 abs ibib py 1-9

L5 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 1998 ACS

AB The present invention describes a method of treating a disease that results from a deficiency of a biol. factor which comprises administering to a mammal **Sertoli** cells and cells that produce the biol. factor. In particular, the present invention describes a method of treating diabetes mellitus by transplanting pancreatic islet of Langerhans cells in conjunction with **Sertoli** cells to create an immunol. privilege site. A method of creating an immunol. privileged site and providing cell stimulatory factors in a mammal for transplants further described by the present invention. A method of co-localizing islet cells with **Sertoli** cells and the use of the co-localized product treating diabetes mellitus is further provided. The present invention further describes a method of creating systemic tolerance to foreign antigens. A method of enhancing the viability, maturation, proliferation of functional capacity of cells in tissue culture is further provided. A pharmaceutical compn. comprising **Sertoli** cells and cells that produce a biol. factor is also provided.

ACCESSION NUMBER: 1997:127489 HCAPLUS
DOCUMENT NUMBER: 126:135688
TITLE: Use of co-localized islets and **Sertoli** cells in xenograft cellular transplants
INVENTOR(S): **Selawry, Helena P.**
PATENT ASSIGNEE(S): Research Corporation Technologies, Inc., USA
SOURCE: PCT Int. Appl., 109 pp.
CODEN: PIXXD2

	NUMBER	DATE
PATENT INFORMATION:	WO 9640178 A1	961219
DESIGNATED STATES:	W: AU, CA, JP, MX, NO RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE	
APPLICATION INFORMATION:	WO 96-US9627	960607
PRIORITY APPLN. INFO.:	US 95-485340	950607

DOCUMENT TYPE: Patent
LANGUAGE: English
PY 1996

L5 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 1998 ACS

AB The testis is a remarkable immune-privileged site, long known for its ability to support allogeneic and xenogeneic tissue transplants. Here we have investigated the mol. basis for testis immune privilege. Testis grafts derived from mice that can express functional CD95 (Fas or Apo-1) ligand survived indefinitely when transplanted under the kidney capsule of allogeneic animals, whereas testis grafts derived from mutant gld mice, which express non-functional ligand, were rejected. Further anal. of testis showed that CD95 ligand mRNA is constitutively expressed by testicular **Sertoli** cells, and that **Sertoli** cells from normal mice, but not gld mice, were accepted when transplanted into allogeneic recipients. CD95 ligand expression in the testis probably acts by inducing apoptotic cell death of CD95-expressing, recipient T cells activated in response to graft antigens. These findings indicate that CD95 ligand could be used to create immune-privileged tissue for a variety of transplant uses.

ACCESSION NUMBER: 1995:885546 HCAPLUS
DOCUMENT NUMBER: 123:283572
TITLE: A role for CD95 ligand in preventing graft

rejection
AUTHOR(S): Bellgrau, Donald; Gold, Daniel; **Selawry, Helena**; Moore, Jordene; Franzusoff, Alex; Duke, Richard C.
CORPORATE SOURCE: Sch. Med., Univ. Colorado, Denver, CO, 80262, USA
SOURCE: Nature (London) (1995), 377(6550), 630-2
CODEN: NATUAS; ISSN: 0028-0836
DOCUMENT TYPE: Journal
LANGUAGE: English
PY 1995

L5 ANSWER 3 OF 9 BIOSIS COPYRIGHT 1998 BIOSIS
AN 96:505491 BIOSIS
AB A lack of a sufficient number of human donor pancreases has stimulated interest in isolation and cryopreservation techniques for islets from the porcine pancreas. But because of a poorly developed outer membrane porcine islets are particularly susceptible to damage during cryopreservation. The aims of this study were twofold: 1) to develop a method for isolation and storage of islets from neonatal porcine pancreas and, 2) to examine effects of **Sertoli** cells on islet yield and function in **Sertoli** cell-islet cell cocultures. A total of 170 neonatal porcine pancreases were processed by means of a short period of digestion with collagenase and culture of the tissues at 32 degree C for periods up to 7 days following isolation. Results were: The mean +-SEM, number of viable islets, and percentage loss of cells following 7 days of culture were 29,442 +- 1,119 and 22.2 +- 1.2, respectively. Cryopreservation had a marked impact on recovery of viable islets: In absence of **Sertoli** cells an average of only 64% of islets remained viable; by contrast, when cryopreserved islets were cocultured with **Sertoli** cells, a mean of 82% was recovered. Glucose at 16.7 mmol/L had the capacity to elicit insulin release from 3-day-old cultured islets. The concentration in absence of **Sertoli** cells was 57.3 +- 3.8, uU/mL/10 islets; in the presence of **Sertoli** cells the level increased to a mean +- SEM of 112.8 t 17.7, uU/mL/10 islets. Similar results were obtained following cryopreservation: glucose at 16.7 mmol/L stimulated a mean +- SEM of 27.9 +- 6.6, uU/mL/10 islets, of insulin in absence of, and 44.9 +- 9.9, uU/mL/10 islets, in presence of, **Sertoli** cells. Our results show that isolation and cryopreservation of neonatal porcine islets can be successfully accomplished. In addition, coculture with **Sertoli** cells significantly improves both the yield and functional capacity of islets following cryopreservation.
DOCUMENT NUMBER: 99227847
TITLE: **Sertoli** cell-induced effects on functional and structural characteristics of isolated neonatal porcine islets.
AUTHOR(S): **Selawry H P**; Wang X; Alloush L
CORPORATE SOURCE: Veterans Affairs Med. Cent., Research 151, 1030 Jefferson Ave., Memphis, TN 38104, USA
SOURCE: Cell Transplantation 5 (5). 1996. 517-524. ISSN: 0963-6897
LANGUAGE: English

L5 ANSWER 4 OF 9 BIOSIS COPYRIGHT 1998 BIOSIS
AN 95:534201 BIOSIS
AB Testis is a remarkable immune-privileged site, long known for its ability to support allogeneic and xenogeneic tissue transplants". Here we have investigated the molecular basis for testis immune privilege. Testis grafts derived from mice that can express functional CD95 (Fas or Apo-1) ligand survived indefinitely when transplanted under the kidney capsule of allogeneic animals, whereas testis grafts derived from mutant gld mice, which express non-functional ligand-8,9, were rejected. Further analysis of testis

showed that CD95 ligand messenger RNA is constitutively expressed by testicular **Sertoli** cells, and that **Sertoli** cells from normal mice, but not gld mice, were accepted when transplanted into allogeneic recipients. CD95 ligand expression in the testis probably acts by inducing apoptotic cell death of CD95-expressing, recipient T cells activated in response to graft antigens. These findings indicate that CD95 ligand could be used to create immuneprivileged tissue for a variety of transplant uses.

DOCUMENT NUMBER: 98548501
TITLE: A role for CD95 ligand in preventing graft rejection.
AUTHOR(S): Bellgrau D; Gold D; **Selawry H**; Moore J; Franzusoff A; Duke R C
CORPORATE SOURCE: Dep. Immunol., Univ. Colo. Sch. Med., Denver, CO 80262, USA
SOURCE: Nature (London) 377 (6550). 1995. 630-632. ISSN: 0028-0836
LANGUAGE: English

L5 ANSWER 5 OF 9 BIOSIS COPYRIGHT 1998 BIOSIS
AN 92:96787 BIOSIS
AB Isolated islet allografts survive indefinitely in the abdominal testis of nonimmunosuppressed diabetic rats. The predominant feature of these testes is that the presence of **Sertoli** cells, but not Leydig cells, is required for extended survival of the islet allografts. **Sertoli** cell cultures were therefore established in vitro and we examined the effects of the conditioned media on Con A-stimulated spleen lymphocyte proliferation. These studies revealed that a product(s) secreted by **Sertoli** cells inhibits Con A-stimulated lymphocyte proliferation in a dose-dependent manner. The synthesis of this product is both temperature-dependent, occurring predominantly at 37.degree. C, and hormone-dependent, requiring the presence of follicle stimulating hormone, in the culture medium. We further examined the mechanism of inhibition of lymphocyte proliferation and showed that **Sertoli** cell-enriched media inhibit the production of IL-2 in a dose-dependent manner. Furthermore, the finding that the addition of exogenous IL-2 is not able to reverse this inhibition indicates that the **Sertoli** cell-enriched media inhibit both IL-2 production and IL-2 responsiveness of T lymphocytes.

DOCUMENT NUMBER: BA93:53337
TITLE: PRODUCTION OF A FACTOR OR FACTORS SUPPRESSING IL-2 PRODUCTION AND T CELL PROLIFERATION BY **SERTOLI** CELL-ENRICHED PREPARATIONS.
AUTHOR(S): **SELAWRY H P**; KOTB M; HERROD H G; LU Z-N
CORPORATE SOURCE: VAMC, RES. 151, 1030 JEFFERSON AVE., MEMPHIS, TENN. 38104.
SOURCE: TRANSPLANTATION (BALTIMORE) 52 (5). 1991. 846-850. CODEN: TRPLAU ISSN: 0041-1337
LANGUAGE: English

L5 ANSWER 6 OF 9 MEDLINE
AB A lack of a sufficient number of human donor pancreases has stimulated interest in isolation and cryopreservation techniques for islets from the porcine pancreas. But because of a poorly developed outer membrane porcine islets are particularly susceptible to damage during cryopreservation. The aims of this study were two-fold: 1) to develop a method for isolation and storage of islets from neonatal porcine pancreas and, 2) to examine effects of **Sertoli** cells on islet yield and function in **Sertoli** cell-islet cell cocultures. A total of 170 neonatal porcine pancreases were processed by means of a short period of digestion with collagenase and culture of the tissues at 32 degrees C for periods up to 7 days following isolation. Results were: The mean +/- SEM, number of viable islets, and percentage loss of cells following 7 days of

culture were 29,442 +/- 1,119 and 22.2 +/- 1.2, respectively, Cryopreservation had a marked impact on recovery of viable islets: In absence of **Sertoli** cells an average of only 64% of islets remained viable; by contrast, when cryopreserved islets were cocultured with **Sertoli** cells, a mean of 82% was recovered. Glucose at 16.7 mmol/L had the capacity to elicit insulin release from 3-day-old cultured islets. The concentration in absence of **Sertoli** cells was 57.3 +/- 3.8 uU/mL/10 islets; in the presence of **Sertoli** cells the level increased to a mean +/- SEM of 112.8 +/- 17.7, uU/mL/10 islets. Similar results were obtained following cryopreservation: glucose at 16.7 mmol/L stimulated a mean +/- SEM of 27.9 +/- 6.6, uU/mL/10 islets, of insulin in absence of, and 44.9 +/- 9.9, uU/mL/10 islets, in presence of, **Sertoli** cells. Our results show that isolation and cryopreservation of neonatal porcine islets can be successfully accomplished. In addition, coculture with **Sertoli** cells significantly improves both the yield and functional capacity of islets following cryopreservation.

ACCESSION NUMBER: 97044140 MEDLINE
DOCUMENT NUMBER: 97044140
TITLE: **Sertoli** cell-induced defects on functional and structural characteristics of isolated neonatal porcine islets.
AUTHOR: **Selawry H P**; Wang X; Alloush L
CORPORATE SOURCE: Department of Veterans Affairs Medical Center, Memphis, TN 38104, USA.
CONTRACT NUMBER: DK-42421-05 (NIDDK)
SOURCE: CELL TRANSPLANTATION, (1996 Sep-Oct) 5 (5) 517-24. Journal code: B02. ISSN: 0963-6897.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199704
ENTRY WEEK: 19970402
PY 1996

L5 ANSWER 7 OF 9 MEDLINE

AB Testis is a remarkable immune-privileged site, long known for its ability to support allogeneic and xenogeneic tissue transplants. Here we have investigated the molecular basis for testis immune privilege. Testis grafts derived from mice that can express functional CD95 (Fas or Apo-1) ligand survived indefinitely when transplanted under the kidney capsule of allogeneic animals, whereas testis grafts derived from mutant gld mice, which express non-functional ligand, were rejected. Further analysis of testis showed that CD95 ligand messenger RNA is constitutively expressed by testicular **Sertoli** cells, and that **Sertoli** cells from normal mice, but not gld mice, were accepted when transplanted into allogeneic recipients. CD95 ligand expression in the testis probably acts by inducing apoptotic cell death of CD95-expressing, recipient T cells activated in response to graft antigens. These findings indicate that CD95 ligand could be used to create immune-privileged tissue for a variety of transplant uses.

ACCESSION NUMBER: 96026301 MEDLINE
DOCUMENT NUMBER: 96026301
TITLE: A role for CD95 ligand in preventing graft rejection [see comments].
COMMENT: Comment in: Nature 1995 Oct 19;377(6550):576
Comment in: Nature 1996 Feb 22;379(6567):682
AUTHOR: Bellgrau D; Gold D; **Selawry H**; Moore J; Franzusoff A; Duke R C
CORPORATE SOURCE: Department of Immunology, University of Colorado School of Medicine, Denver 80262, USA.
SOURCE: NATURE, (1995 Oct 19) 377 (6550) 630-2.

Journal code: NSC. ISSN: 0028-0836.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Cancer Journals; Priority Journals
ENTRY MONTH: 199601
PY 1995

L5 ANSWER 8 OF 9 MEDLINE
AB Prolonged survival of Islet- allo- and xenografts can be induced following implantation of the islets into the abdominal testis of diabetic rats. We previously showed that a factor released by **Sertoli** cells appears to be responsible for the protection of the intratesticular islet allo- and xenografts against rejection. The aim of this study was to examine whether an immunologically privileged site can be established in an organ site in vivo, other than the testis, such as the renal, subcapsular space, to make feasible the grafting of female recipients as well. A total of 36 male and 21 female, diabetic, PVG rats were divided into six different treatment groups: 1) Six male rats were grafted with islets from Sprague-Dawley (S-D) donor rats only. 2) Ten male rats were grafted with islets from (S-D) donors and were then given a short course of cyclosporine (CsA) posttransplantation. 3) Ten male rats were grafted with islets from (S-D) donors and with **Sertoli** cell-enriched fractions (SEF) from PVG donors but without CsA. 4) Ten male rats were grafted with a combination of islets from (S-D) and SEF from (PVG), donors, respectively, and CsA. 5) Ten female rats were given an identical combination of cells and CsA as depicted for group 5. 6) Ten female rats were grafted with a combination of islets and SEF, both cell types from S-D donors, and CsA. The results showed that 70% to 100% of the grafted rats in groups 1, 2, and 3 remained hyperglycemic.(ABSTRACT TRUNCATED AT 250 WORDS)
ACCESSION NUMBER: 94191899 MEDLINE
DOCUMENT NUMBER: 94191899
TITLE: **Sertoli** cell-enriched fractions in successful islet cell transplantation.
AUTHOR: **Selawry H P**; Cameron D F
CORPORATE SOURCE: Department of Veterans Affairs Medical Center, Memphis, TN 38104..
SOURCE: CELL TRANSPLANTATION, (1993 Mar-Apr) 2 (2) 123-9.
Journal code: B02. ISSN: 0963-6897.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199407
PY 1993

L5 ANSWER 9 OF 9 MEDLINE
AB Isolated islet allografts survive indefinitely in the abdominal testis of nonimmunosuppressed diabetic rats. The predominant feature of these testes is that the presence of **Sertoli** cells, but not Leydig cells, is required for extended survival of the islet allografts. **Sertoli** cells cultures were therefore established in vitro and we examined the effects of the conditioned media on Con A--stimulated spleen lymphocyte proliferation. These studies revealed that a product(s) secreted by **Sertoli** cells inhibits Con A-stimulated lymphocyte proliferation in a dose-dependent manner. The synthesis of this product is both temperature-dependent, occurring predominantly at 37 degrees C, and hormone-dependent, requiring the presence of follicle stimulating hormone, in the culture medium. We further examined the mechanism of inhibition of lymphocyte proliferation and showed that **Sertoli** cell-enriched media inhibit the production of IL-2

in a dose-dependent manner. Furthermore, the finding that the addition of exogenous IL-2 is not able to reverse this inhibition indicates that the **Sertoli** cell-enriched media inhibit both IL-2 production and IL-2 responsiveness of T lymphocytes.

ACCESSION NUMBER: 92055960 MEDLINE
DOCUMENT NUMBER: 92055960
TITLE: Production of a factor, or factors, suppressing IL-2 production and T cell proliferation by **Sertoli** cell-enriched preparations. A potential role for islet transplantation in an immunologically privileged site.
AUTHOR: **Selawry H P**; Kotb M; Herrod H G; Lu Z N
CORPORATE SOURCE: Veterans Administration Medical Center, Memphis, Tennessee..
CONTRACT NUMBER: RO1 DK40341-01A1 (NIDDK)
SOURCE: TRANSPLANTATION, (1991 Nov) 52 (5) 846-50.
Journal code: WEJ. ISSN: 0041-1337.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199202
PY 1991

=> d his